

**This Page Is Inserted by IFW Operations  
and is not a part of the Official Record**

## **BEST AVAILABLE IMAGES**

**Defective images within this document are accurate representation of  
The original documents submitted by the applicant.**

**Defects in the images may include (but are not limited to):**

- **BLACK BORDERS**
- **TEXT CUT OFF AT TOP, BOTTOM OR SIDES**
- **FADED TEXT**
- **ILLEGIBLE TEXT**
- **SKEWED/SLANTED IMAGES**
- **COLORED PHOTOS**
- **BLACK OR VERY BLACK AND WHITE DARK PHOTOS**
- **GRAY SCALE DOCUMENTS**

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

MAILED

Art Unit 153

JUN 25 1987

Paper No. 36

U.S. PATENT OFFICE  
BOARD OF PATENT APPEALS  
AND INTERFERENCES

Appeal No. 660-84

rad

ON BRIEF

UNITED STATES PATENT AND TRADEMARK OFFICE

-----  
BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES  
-----

Ex parte Jean-Yves Chenard  
and  
Jean-Claude Mendelsohn

-----  
Application for Patent filed April 15, 1981, Serial  
No. 254,313, a continuation-in-part of Serial No. 070,503,  
filed August 28, 1979. Stabilization of Vinyl Halide Polymers.

-----  
Jack Matalon et al. for appellants.  
-----

Primary Examiner - Veronica P. Hoke.  
-----

Before Sturtevant, Torchin and Downey, Examiners-in-Chief.  
Downey, Examiner-in-Chief.

This is an appeal from the final rejection of claims 59  
through 62 and 64 through 69. The remaining claims, 63 and 70  
(noted as claims 60 and 73 in the examiner's answer), stand allowed.

The claims in this application are directed to a method for  
stabilizing a vinyl halide polymer, for example vinyl chloride  
polymer, by incorporating therein a mono- or diorgano- derivative

Appeal No. 660-84

of a tetravalent tin in combination with a mercaptoloweralkanol ester of a carboxylic acid containing 2 to 20 carbon atoms (mercapto ester). Claims 59 through 62 and 64, in Jepson format, recite a method of stabilizing a vinyl halide polymer by incorporating the mono- or diorgano-derivative of tetravalent tin having certain groups attached to the remaining tin valences wherein the improvement comprises replacing part of said organotin stabilizer with a mercapto ester. Said mercapto ester is the reaction product of an optionally substituted mercaptohydrocarbylene-ol with a carboxylic acid. Claim 65 is directed to a method of stabilizing the vinyl halide polymer with said tin derivative and said mercapto ester; the claim also recites the concentrations for the individual ingredients. Claims 66 through 69 are directed to the stabilized vinyl halide compositions. Illustrative claims 59, 65 and 66 are reproduced in Appendix A.

The references relied upon by the examiner are:

Kugele et al. (Kugele)	4,360,619	Nov. 23, 1982
Japanese Kokai	55-160,044	Dec. 12, 1980
Japanese Kokai	56-2,336	Jan. 12, 1981

The references relied upon by the Board are:

Wilson	2,707,178	Apr. 26, 1955
Hechenbleikner et al. (Hechenbleikner)	3,167,527	Jan. 26, 1965
Larkin	3,715,333	Feb. 6, 1973
Gough et al. (Gough)	4,021,407	May 3, 1977

Claims 59 through 62 and 64 through 69 stand rejected under 35 USC 102(a) as fully met by Japanese Kokai 55-160,044 and Japanese Kokai 56-2,336 and Kugele.

Appellants, in their brief bridging pages 10 and 11, concede that the cited references are clearly pertinent and will support the final rejections of the claims on appeal, provided that the references are otherwise effective references and/or have not been overcome pursuant to the provisions of 37 CFR 1.131. Consequently,

Appeal No. 660-84

this application being a continuation-in-part of Serial No. 070,503, which parent application claims benefit of French application No. 78 24863, it must be initially determined whether the appealed claims are to be accorded benefit of appellants' earlier application(s).

I. 35 USC 120 Benefit

To be entitled to the filing date of a previously filed application under the provisions of 35 USC 120, the subject matter set forth in the claims of a continuing application must have been described in the parent application with the clarity and completeness required by 35 USC 112. It is well settled that claimed subject matter which is first disclosed in a continuation-in-part is not entitled to the filing date of the parent application. In re van Langenhoven, 458 F.2d 132, 173 USPQ 426 (CCPA 1972).

The examiner took the position that the present claims were not entitled to benefit of the filing date of the parent application because the present application amplified the scope of the claimed mercapto ester (pp. 8-13) and the organo tin stabilizer (pp. 14-16) as well as described, for the first time, the use of combinations of tin stabilizers (p. 18) and the use of an organo tin halide in a concentration up to one-third of the essential organo tin stabilizer.

The parent application, Serial No. 070,503, describes the mono- and diorgano derivatives of tetravalent tin with or without sulfur, for example di-n-octyltin-bis-(isooctyl-mercapto acetate), the condensation polymer of butyl stannic and butyl thiostannic acids, butyl stannic acid, the mixture of the anhydride of thiobutyl stannic acid with di-n-butyltin-bis(isodecyl-mercapto acetate) and di-n-butyltin-bis (isooctyl-mercapto acetate)(see Examples 3 through 11). The mercapto ester is described as RCOO-R'SH, where the R is an alkyl or an alkenyl containing at least 2 carbon atoms, preferably 6 to 38 carbon atoms, and possibly carrying a second carboxylic group

Appeal No. 660-84

which may or may not be combined with a second -R'SH group, and where the R' is a C<sub>2</sub> to C<sub>18</sub> alkylene group.

The present application, Serial No. 254,313, enlarges the scope of both the mono- or diorganotin derivative and the mercapto ester used to stabilize the polyvinyl halide polymer. In particular, the tin derivative now claimed includes a mono- and diorganotetravalent tin derivative where the remaining valences are satisfied by halogen and phosphorus as well as by the removal of the hydrogen atom from the oxygen atom of a carboxylic acid, an alcohol or toluol and the removal of hydrogen atom from the sulfur atom of the mercaptan, mercapto alcohol, mercapto acid or mercapto alcohol ester (see pp. 14-16). And the mercapto ester now includes the addition of optional substituents, as well as the addition of oxygen, carbonyl oxy, nitrogen and sulfur in the linear hydrocarbylene chain. Also, in forming the mercapto ester by reacting an acid with a mercapto alcohol, acid-capped polyethers, acid-capped silicone esters, and amino acids are now disclosed as useful (see pp. 8-13).

From our review of the parent application and the present application, we agree with the examiner that appellants are not entitled to the benefit of the filing date of their parent application for the ~~instant claims~~ on appeal since they define subject matter not disclosed in the parent case. Since appellants cannot claim benefit of the filing date of their parent case, claims 59 through 62 and 64 through 69 are accorded the date of April 15, 1981, the filing date of the instant application, and the Japanese documents and the Kugele patent are available 35 USC 102 references. We are not persuaded by appellants' argument that their French application and parent application disclosures are sufficient to show that appellants were in possession of a generic concept. The term "invention" as used in 35 USC 120 refers to the claimed invention and not a concept.

II. 35 USC 102(a) Rejection over Japan 55-160,044 and 56-2,336

Claims 59 through 62 and 64 through 69 stand rejected under 35 USC 102(a) as fully met by Japanese Kokai 56-2,336 and Japanese Kokai 55-160,044. We affirm.

Appellants rely on a declaration under 37 CFR 1.131 (Paper No. 16) to establish reduction to practice of the claimed invention in this country prior to the effective date of these references, i.e., to antedate the references. For the reasons which we discuss below, we find that the references have not been successfully removed.

Japan 55-160,044, published December 12, 1980, discloses stabilizing halogen-containing resin compositions such as polyvinyl chloride by the use of a mono- or diorgano-tin derivative in combination with a mercapto ester, e.g., 2-mercaptoethyl oleate. The mono- or diorgano-tin derivatives include not only those where the remaining valences are bonded to halogen, sulfur and a residue resulting from the removal of the hydrogen atom from the sulfur atom of a mercapto acid ester but also removal of hydrogen atom from the oxygen atom of a carboxylic acid [dibutyltin bis(butylmaleate), page 12] and the removal of hydrogen atom from the sulfur atom of a mercaptan (dibutyltin dilauryl mercaptide, page 12).

Japan 56-2,336, published January 12, 1981, also discloses stabilizing halogen-containing resins such as polyvinyl chloride by use of a mono- or diorgano-tin derivative in combination with a mercapto ester, e.g., 2-mercaptoethyl oleate. The mono- or diorgano-tin derivatives described therein include not only those where the remaining valences are bonded to halogen, sulfur and the residue resulting from the removal of hydrogen atom from the sulfur atom of a mercapto acid ester but also those where the remaining valences include oxygen(monobutyltin sulfide oxide, page 5), the residue resulting

from the removal of hydrogen atom from the oxygen atom of a carboxylic acid (dibutyl tin dilaurate, page 15) and a hydrogen atom from the sulfur atom of a mercaptan (dibutyltin bis lauryl mercaptide, page 3).

In order to effectively remove these references, appellants need to show priority with respect to only so much of the claimed invention as the references disclose, In re Stempel, 44 CCPA 820, 241 F.2d 755, 113 USPQ 77 (1957), or only so much as to render the claimed invention obvious. In re Spiller, 500 F.2d 1170, 182 USPQ 614 (CCPA 1971).

Here, the affidavit of Mr. Foure, a chemist, taken with the declarations of Mr. Chenard and Mr. Mendelsohn, the inventors, show four ternary stabilizer compositions, A, B, C, and D, comprising first and second tin derivatives in combination with mercaptoethyl oleate (mercapto ester) to stabilize a vinyl chloride polymer. Stabilizers A and C show the first organo tin derivative having its remaining valences satisfied by bonds to sulfur and mercapto acid ester residue and the second organo tin derivative having its remaining valences satisfied by bonds to halogen; whereas stabilizers B and D show the first organo tin derivative having its remaining valences satisfied by bonds to sulfur and halide and the second organo tin derivative having its remaining valences satisfied by bonds to halogen.

Inasmuch as the affidavit evidence shows only part of what the Japan Kokai references show, it does not serve to effectively remove the references by the standard set forth in Stempel, supra. Contrary to appellants' arguments, it is how much the references show of the claimed invention that is crucial to the requirement of what the affidavit must show. And as noted above, each Japanese reference shows more than one organo tin derivative within the claimed invention.

Since the affidavit has not been found to be commensurate with the reference disclosures, it is proper to consider obviousness of the differences between what is shown and what is claimed because possession of what is shown carries with it possession of variations and adaptations which would at the same time be obvious to one of ordinary skill in the art. In re Spiller, supra. The difference between the organo tin derivative shown and those claimed is an organo tin derivative having the remaining valences satisfied by bonds to oxygen, phosphorus, a residue resulting from i) the removal of the hydrogen atom from the oxygen atom of a carboxylic acid, an alcohol or a polyol and ii) the removal of the hydrogen atom from the sulfur atom of a mercaptan, mercapto acid, mercapto alcohol or mercapto alcohol ester. Appellants have the burden of going forward with an allegation that the organo tin derivatives in the affidavit would have rendered obvious the other organo tin derivatives claimed. Appellants have not proffered any such allegation that these differences would have been obvious from the showing; therefore, they have not sustained their burden of going forward. By implication, Paragraph 5 of the Supplemental Declaration by Mr. Foure, dated July 13, 1984, may be viewed as an attempt to infer this obviousness. However, the present record and brief do not clearly state that the showing of organo tin derivatives having their remaining valences satisfied by bonds to sulfur, halogen and mercapto acid ester would have rendered the claimed invention obvious. Thus, the Rule 131 evidence is deemed ineffective to remove the Japan references.

### III. 35 USC 102 Rejection over Kugele

Claims 59 through 62 and 64 through 69 also stand rejected under 35 USC 102 as anticipated by Kugele.



Appeal No. 660-84

After careful consideration of the arguments presented by appellants and the examiner, we are unpersuaded of any reversible error in the examiner's position. Accordingly, we will affirm this rejection.

The examiner's position is that the Rule 131 affidavit is ineffective since appellants are claiming the same invention as is claimed in the Kugele patent, and therefore the appropriate relief is by means of an interference proceeding. Although the appealed claims recite a two-component stabilizer, the examiner indicates that the organo tin halide stabilizer claimed by Kugele is not excluded by appellants' open-ended claims and is supported at page 21 of the instant disclosure where it states that up to one-third of the organo tin derivative can be replaced by an organo tin halide such as butyltintrichloride. The examiner required the appellants to copy claims from the Kugele patent, asserting that the patent laws do not permit more than one patent to issue for the same invention. Aelony v. Arni, 547 F.2d 566, 192 USPQ 486 (CCPA 1977).

Appellants have refused to copy the claims from the Kugele patent, urging that the filing date of the U.S. Patent to Kugele is several years later than the effective date of their application. However, the effective filing date of the parent application has not been granted since appellants in this application chose to present claims containing subject matter not supported by their parent application (see I. above). Compare In re Scheiber, 587 F.2d 59, 199 USPQ 782 (CCPA 1978). Kugele, having an effective filing date of February 26, 1981, is prior art to the appealed claims accorded the date of April 15, 1981.

Appellants also argue that the Kugele specification and the claims are sufficiently different from the invention described and claimed by appellants such that there is no interference-in-fact. The test of interference-in-fact is not whether two sets of claims overlap, but whether they are patentably distinct from each

Appeal No. 660-84

other. Aelony v. Arri, supra. As set forth in 37 CFR 1.601 (n), the same patentable invention and separate patentable invention are defined as follows:

Invention "A" is the "same patentable invention" as an invention "B" when invention "A" is the same as (35 U.S.C. 102) or is obvious (35 U.S.C. 103) in view of invention "B" assuming invention "B" is prior art with respect to invention "A". Invention "A" is a "separate patentable invention" with respect to invention "B" when invention "A" is new (35 U.S.C. 102) and non-obvious (35 U.S.C. 103) in view of invention "B" assuming invention "B" is prior art with respect to invention "A".

Kugele discloses and claims a two-component and a three-component stabilizer for halogen-containing polymers, a process of stabilizing the halogen-containing polymers and the stabilized polymer composition. The two-component stabilizer composition comprises an organo tin halide derivative selected from Formulas III, IV and V and a mercapto ester, e.g., a mercapto ethyl oleate (col. 12, lines 6-8). The three-component stabilizer composition comprises a first organo tin derivative selected from Formulas I through V, a second organo tin halide derivative of Formula XII and a mercapto ester. Kugele's first and second organo tin derivatives are the same as appellants' organo tin derivatives, for example, note Table I, compound 4, Table II, compound 8, and column 14, lines 33-37.

Appellants' organo tin derivative, as claimed, may have one of its remaining valences satisfied by bond to halogen and the other to mercapto acid ester. We find no restriction on the selection of the remaining valences of the tin derivative. Thus appellants are claiming the same two-component stabilizer of Kugele. Appellants' disclosure and claims, as correctly pointed out by the examiner, support the addition of a second organo tin halide stabilizer to the first organo tin derivative. Thus we agree with the examiner that the instant claims are not patentably distinct from those of Kugele in that the appealed claims define the same patentable invention within the meaning of 1.601(n).

Since 37 CFR 1.131 does not provide means to overcome a reference which claims the same invention, the affidavit submitted

Appeal No. 660-84

will not serve to obviate this rejection. The appellants have adduced no evidence to support their position that there is no interference-in-fact. The affidavit showing, as noted above, and the statements made by the inventors are inconsistent with the allegation that there is no interference-in-fact in that the Stabilizers A through D show a first organo tin derivative, a second organo tin halide derivative and a mercapto ester.

IV. Rejections under the Provisions of 37 CFR 1.196(b)

Under the provisions of 37 CFR 1.196(b), the following rejections are entered:

-A-

Claims 59 through 62 and 64 through 69 are rejected on the basis of a disclaimer of the subject matter of the Kugele claims within the meaning of In re Ogilvie, 517 F.2d 1182, 186 USPQ 227 (CCPA 1975). Appellants have disclaimed the invention by refusing to copy the claims of the Kugele patent. As noted above in III, we are convinced that appellants and Kugele are claiming the same invention. The examiner also proposed modified claims to the appellants for purposes of interference. Appellants did not copy the modified claims, arguing that the proposed modified claims omitted material limitations, that is, the concentrations of the components. However, appellants have failed to provide any evidence that concentration is a separate patentable invention. We have no reason to doubt that appellants have support for the proposed modified claims which omit concentration since they present claims 59 through 62 which are devoid of concentrations. We also fail to see that the concentration of the components is a separate patentable invention when it appears that Kugele and appellants use the same concentration of components. Note Kugele, Table I, Example No. 6, and Table B, Examples 13a through 13g and 14. Thus appellants' failure to copy the claims of the Kugele patent or the proposed

modified claims constitutes a disclaimer of that subject matter and makes the subject matter available as prior art against the appellants' claims. In re Ogilve, supra; In re Phillips, 673 F.2d 1273, 213 USPQ 353 (CCPA 1982).

-8-

Claims 59 through 62 and 64 through 69 are rejected under 35 USC 103 over Gough in view of Hechenbleikner. Gough teaches the synergistic combination of organo tin borate with an organic thiol for stabilization of a vinyl halide polymer as an improvement upon the use of conventional organo tin compounds. Gough's organic thiol of Formula (f) reads on the mercapto ester claimed as noted by the description of such ester found on pages 8-13 of appellants' disclosure. The weight ratio of the tin to thiol stabilizer can vary widely but it is recommended to be 1:4 to 4:1. Such lower ratio is within that of the appealed claims (col. 5, lines 8-35). Gough differs from the appealed claims by the choice of tin stabilizer. However, it would have been prima facie obvious to one of ordinary skill in the art to use other organo tin stabilizers recognized for stabilization of polyvinyl chloride, as in Hechenbleikner, for the organotin borate of Gough with the reasonable expectation that the combination would effectively stabilize the polyvinyl halide polymer.

We are cognizant that appellants have submitted a declaration by Mr. Foure, dated August 18, 1982, under the provisions of 37 CFR 1.132 comparing Gough's mercapto compounds and organotin borate with appellants' mercapto ester and organotin compounds without borate. However, we find such evidence to be nonpersuasive. The declaration lacks sufficient probative value in that it fails to compare those organic thiols of Gough within Formula (f), in particular the specific adipate disclosed at column 8, line 18, in combination with the organotin borate.

-C-

Claims 59 through 62 and 64 through 69 are rejected under 35 USC 102 as anticipated by Hechenbleikner. Hechenbleikner describes the combination of organic tin stabilizer and a sulfur stabilizer both in 0.01% to 10% by weight of the resin. The sulfur stabilizer at column 3, lines 45-55, reads on the instant claimed mercapto ester as noted by appellants' specification page 8 wherein R<sub>1</sub> includes carbonyl oxy in the chain to provide a linear polyester group and R<sub>2</sub> includes hydrocarbylene substituted with mercapto.

-D-

Claims 59 and 62 are rejected under 35 USC 102 as anticipated by Wilson and claims 59 through 62 and 64 through 69 are rejected under 35 USC 103 as unpatentable over Wilson taken with Hechenbleikner. Wilson describes the addition of a primary stabilizer and a secondary stabilizer to a polyvinyl halide polymer. The primary stabilizer is an organotin compound such as dibutyl tin dilaurate or dibutyl tin maleate (col. 5, lines 56-58). And the secondary stabilizer is a resinous polyester reaction product of a mercapto alcohol with a dicarboxylic acid in a concentration of 0.01% to 5% by weight of the resin which reads on appellants' mercapto ester as described on pages 9-10 of the instant specification. Thus Wilson anticipates claims 59 through 62. The use of other recognized organotin stabilizers in conventional concentrations as in Hechenbleikner would have been obvious to one of ordinary skill in this art.

-E-

Larkin is cited of interest to show the combination of tin stabilizer with an organotin halide for improved stabilization of polyvinyl chloride polymers.

V. Recommendation under 37 CFR 1.196(d)

In addition to affirming the examiner's rejections of the appealed claims and making rejections under the provisions of 37 CFR 1.196(b), we include herein the following statement under the provision of 37 CFR 1.196(d) with respect to the allowed claims 63 and 70. The allowed claims are directed to specific tin stabilizers which are devoid of a halogen radical. In light of the fact that these tin stabilizers are in the prior art, note Hechenbleikner, at col. 2, lines 40-63, Wilson, col. 5, line 58, and Kugele, formulas II, III and IV, we can perceive no good reason why claims 63 and 70 are any more patentable than the rejected claims. Accordingly, we recommend that the allowance of these claims 63 and 70 be withdrawn and the claims rejected.

The decision of the examiner is affirmed. New rejections under the provisions of 37 CFR 1.196(b) have been made and we have made a statement as to the allowed claims under the provisions of 37 CFR 1.196(d). In view of our statement under 37 CFR 1.196(d), this case is remanded to the examiner.

A period of one month is set in which the appellants may submit to the Primary Examiner an appropriate amendment or a showing of facts or reasons, or both, in order to avoid the grounds set forth in the Statement of the Board of Patent Appeals and Interferences under the provisions of 37 CFR 1.196(d) and/or prosecute further before the Primary Examiner by way of amendment or showing of facts, or both, not previously of record with respect to the new rejection under 37 CFR 1.196(b) if the appellants so elect.

Upon conclusion of the proceedings before the Primary Examiner on remand, this case should be returned to the Board by the Primary Examiner so that the Board may either adopt its



Illustrative Claims

59. In a method for stabilizing a vinyl halide polymer against heat and light which comprises incorporating a tin-containing stabilizer therein, said stabilizer comprising a mono- or diorgano-derivative of tetravalent tin where the remaining valences of the tin atom are satisfied by bonds to halogen, oxygen, phosphorus, sulfur and a residue resulting from

- i) removal of the hydrogen atom from the oxygen atom of a carboxylic acid, an alcohol or a polyol, or
- ii) removal of the hydrogen atom from the sulfur atom of a mercaptan, mercaptoacid, mercaptoalcohol, mercaptoacid ester or mercaptoalcohol ester,

and where any oxygen present in said tin-containing stabilizer is bonded only to one or more of tin, carbon, phosphorus and hydrogen, the improvement which comprises replacing part of the tin-containing stabilizer with a mercaptoloweralkanol ester of a carboxylic acid containing 2 to 20 carbon atoms.

65. A method for stabilizing a vinyl halide polymer [sic, polymer] against heat and light which comprises incorporating therein

- a) a tin-containing stabilizer comprising a mono- or diorganotin oxide, sulfide, carboxylate, mercaptide, derivative of a mercaptoacid, derivative of a mercaptoalcohol, or their esters, and
- b) a mercaptoloweralkanol ester of a carboxylic acid containing 2 to 20 carbon atoms,

there being present up to about 0.25 parts of tin per 100 parts of polymer and up to about 6.5 parts of mercaptoloweralkanol ester per 100 parts of polymer.

66. A vinyl halide composition which has been stabilized with respect to heat and light by incorporating therein

- a) a heat stabilizer comprising a mono- or diorgano-derivative of tetravalent tin where the remaining valences of the tin atom are satisfied by bonds to halogen, oxygen, phosphorus, sulfur and a residue resulting from
  - i) removal of the hydrogen atom from the oxygen atom of a carboxylic acid, an alcohol or a polyol, or
  - ii) removal of the hydrogen atom from the sulfur atom of a mercaptan, mercaptoacid, mercaptoalcohol, mercaptoacid ester or mercaptoalcohol ester,

and where any oxygen present is bonded only to one or more of tin, carbon, phosphorus and hydrogen,

and

- b) a mercaptoloweralkanol ester of a carboxylic acid containing 2 to 20 carbon atoms, there being present up to about 0.25 of tin per 100 parts of polymer and up to about 6.5 parts of mercaptoloweralkanol per 100 parts of polymer.